Name:

*Mr. Tiénou-Gustafson & Mr. Bielmeier*

Geometry, Period

Due Date: Wed, 18 Mar 2015

**Geometry**

**Homework**



**Failure to show all work and write in complete sentences will result in LaSalle!**

|  |  |
| --- | --- |
| 1) Find the value of each variable in the parallelogram. | 2) Find the value of each variable in the parallelogram. |
| 3) Find the value of each variable in the parallelogram. | 4) Find the value of each variable in the parallelogram. |

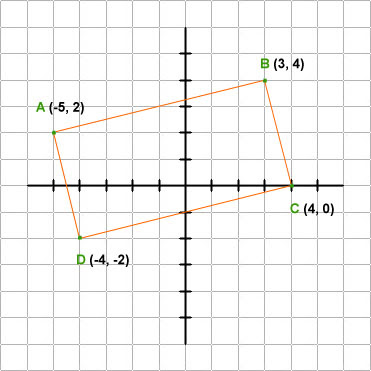
|  |  |
| --- | --- |
| 6) Find the area of the parallelogram. | 7) Find the area of the shaded polygon. |
| 8) If the area of a square is 49 m. How long is the diagonal of the square? Draw & show all work. | 10) For a given rectangle, the length is 6 units longer than the width. If the perimeter of the rectangle is 44 units. Find the area of the rectangle. Draw & show all work. |

**Types of Parallelograms Exploration**

If you can prove one of the following about a quadrilateral, this is enough to prove it is a parallelogram:

(1) opposite sides are parallel, (2) opposite sides are congruent, or (3) opposite angles are congruent.

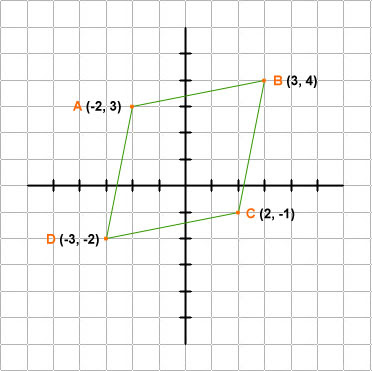
For the 3 figures below, use any of the methods above to prove that it is a parallelogram. Each figure has an additional property (of angles and/or sides) that is not true of all parallelograms. Find this property! *(For example, for figure 1, you could show that not only are opposite sides congruent, proving it is a parallelogram, but also the long side is twice the length of the short side. Now you can’t use this relationship!)*

**Figure 1**

What type of shape do you think this is?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is this a parallelogram?\_\_\_\_\_\_\_\_\_ Prove it! (Method of your choice)

What is one other property that is true about the side or angle relationships? Show work to demonstrate this.

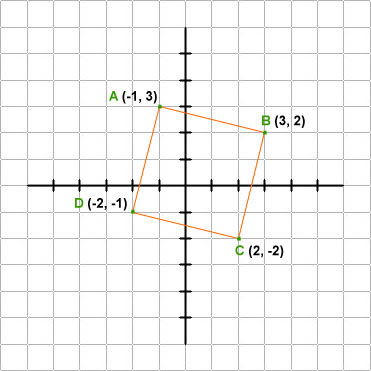
**Figure 2**

What type of shape do you think this is?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is this a parallelogram?\_\_\_\_\_\_\_\_\_ Prove it! (Method of your choice)

What is one other property that is true about the side or angle relationships? Show work to demonstrate this.

**Figure 3**

What type of shape do you think this is?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Is this a parallelogram?\_\_\_\_\_\_\_\_\_ Prove it! (Method of your choice)

What is one other property that is true about the side or angle relationships? Show work to demonstrate this.